

2011 Flooding Event Response Efforts by DEQ Public Water Supply Program



Dusti Lowndes
MT DEQ PWS program

Montana Hydrology Workshop
Aug. 28, 2012

What is a Public Water Supply?

- A water system that serves 15 connections or 25 people at least 60 days out of the year.
- Types and components vary
- Three classifications
- Certified operators may be required
- Monitoring requirements
- DEQ PWS is the regulatory agency

Presentation Objectives

- Seasonal Background Information
- Flood Event Timeline
- Response Efforts
- Impacts to Water and Wastewater Systems
- Recovery and Mitigation Efforts
- Second Disaster Strikes – July 1

Seasonal Background Information

Conditions Contributing to Major Flooding

Which damaged homes, personal property and public infrastructure include:

- saturated soil conditions
- record snowfall
- record high water equivalent in the winter snowpack
- lack of available surface storage
- log and debris jams along rivers and tributaries
- torrential rainfall (8-10" in some areas)

“Flooding is going to get worse before it gets better” –
Gov. Schweitzer in late May 2011



The Governor's requested and President Barrack Obama approved a Presidential Declaration of a Federal Major Disaster/ Emergency for Montana which allowed for federal assistance under the federal response plan.

June 9th - The estimated damage total was \$8,601,039 and the state and local share of that amount \$2,150,260.

Because this was an ongoing event, damage estimates went up and the number impacted of counties, local and tribal jurisdictions increased.

These totals only represent damage to public infrastructure. Local emergency managers were still collecting information about losses incurred by individuals. Individual Assistance was added and approved August 23rd.

Statements made in the
Governor's request of
Federal Assistance-

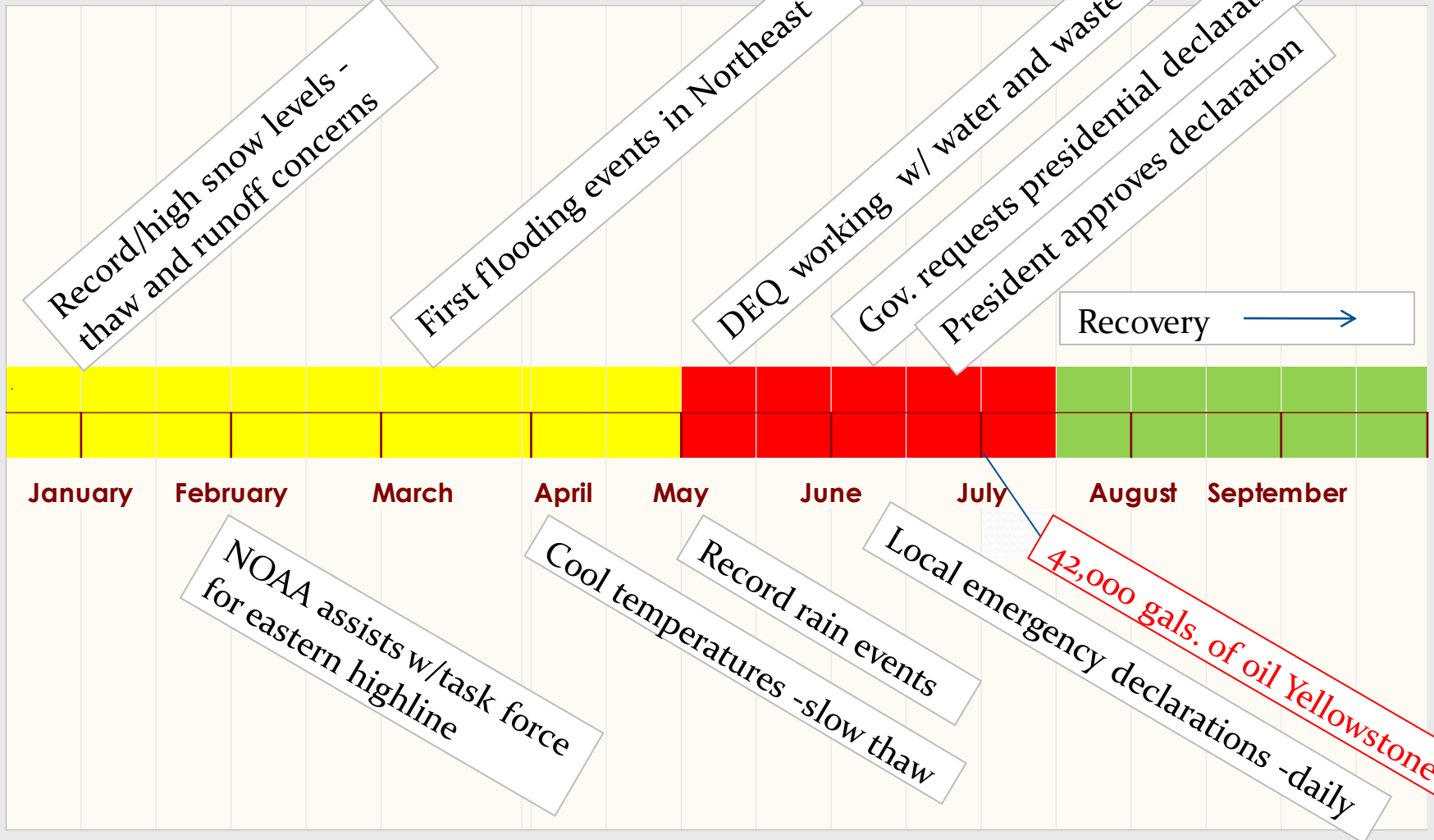
Crow Reservation

- Flooding resulted in the loss of water and sewer systems and the evacuation and sheltering of approximately 300 people.
- During the initial stages of the flood, Interstate 90 was closed for approximately 70 miles from May 22nd to May 26th. Many secondary roads and bridges were damaged and closed limiting access to many of the affected areas.
- In addition, the Crow Indian Hospital operated by the U.S. Public Health Service and a long-term care center operated by the tribe have been closed. Patients and residents were evacuated to Billings, 60 miles away.
- As damage assessments are being conducted and residents are returning home, approximately 50 individuals are still sheltered and the hospital and long-term care center are still closed.
- The community water supply is under a boil order and sewage systems supporting several major facilities, including the hospital, are inoperable.
- In its role as primary agency for ESF6, DPHHS has coordinated with the ARC and VOAD.
- Resource requests for Crow agency have included: sheltering/feeding for 300 individuals; a separate feeding request for another 300 individuals throughout the reservation unable to leave their area due to road damage; and miscellaneous items such as formula, diapers, and other care items.
- Unfortunately, the area expects impact from additional rainfall and snow melt over the next three to four weeks that may flood the area again.

(Precipitation attachment to the letter from Gov. Schweiter to the President yesterday)

Station	Record Type	New Record	Date (May)	Previous Record	Year of Previous Record
Billings	High Daily Precip	1.08	9	0.80	1986
Billings	High Daily Precip	1.51	10	0.90	1967
Glasgow	High Daily Precip	0.91	10	0.80	1914
Miles City	High Daily Precip	2.22	10	0.90	1904
Miles City	High Daily Precip	0.51	18	0.43	1896
Miles City	High Daily Precip	1.04	21	0.70	1957
Billings	High Daily Precip	3.12*	24	1.14	1939
	Highest 24-hr Precip	3.12	24	2.91	June 8, 1997
Dillon	High Daily Precip	0.85	24	0.63	1953
Livingston	High Daily Precip	2.08	24	1.12	2009
Billings	High month prec	9.54		7.71	May 1981
Powderville	High month prec	10.40		7.72	July 1993
Ekalaka	High May precip	11.71		9.03	July 1993
Glasgow	High May precip	6.97		6.61	2007
Hysham	High May precip	7.66		6.73	1977
Miles City	High May precip	8.84		6.81	1978

2011 Flooding Events



Milk River Basin

“Milk River rose to record levels caused by the rapid snowmelt of up to 800% of normal winter snowfall.”

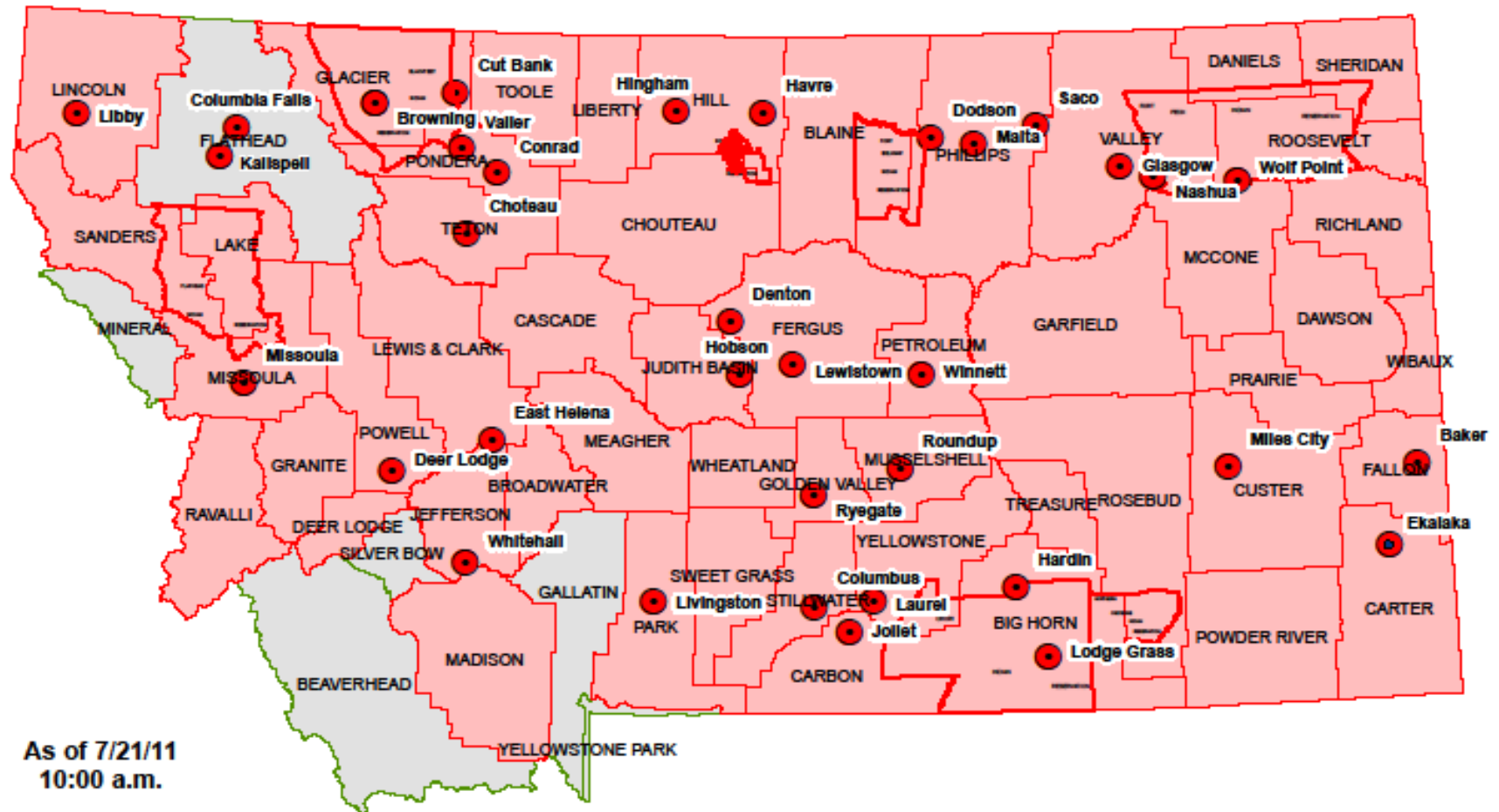
Flooding TASK FORCE stood up with NOAA

Response Efforts



Flood Declarations 2011

Tribal, County and City or Town
Locally Declared Emergencies



Partner Agency Efforts

- **DES: SECC** -state emergency coordination center
 - Rescue missions, civil air patrol photos, resource requests
 - Activated several Emergency Support Functions (ESF) such as #6 Mass Care and ESF #8 Public Health & Medical Services
 - WEB EOC for state wide situational awareness
- **National Guard** – mobilized 98 soldiers and 44 vehicles for assistance and traffic control in Roundup and Crow Reservation
- **EPA Montana** – Tribal Water and Wastewater Systems
- **DHS**
 - Critical Infrastructure Protection
 - FEMA: PDA teams conducting disaster assessments
 - Processing of claims for federal assistance
- **DPHHS** –stood up dept. incident command structure to support ESF #6 Mass Care and ESF#8 Public Health for the SECC



DEQ's Response Efforts

- **Duty Officer (DO) Program** – 24/7
- **Web EOC** (emergency operations center) at State Emergency Coordination Center (SECC)
- **Other programs** – Waste & Underground Tank Management Bureau, Water Protection Bureau, Remediation Division, & Source Water Protection (produced septic info. and working on private well info.)
- **DEQ PIOs** – Lisa Peterson & Mary Ann Dunwell (remediation)
 - Public outreach
- **Web page flood help info.**
 - Front page of DEQ site : <http://deq.mt.gov/default.mcpix>
 - SecureWater site: <http://deq.mt.gov/wqinfo/pws/security/default.mcpix>
 - SHARENET for department staff: <http://deq.sharepoint.mt.gov/default.aspx>
 - MT WARN site: www.mtwarn.org

DEQ PWS Program Efforts

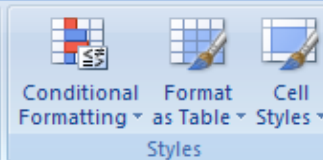
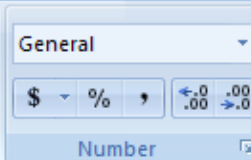
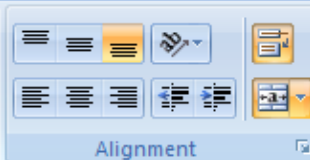
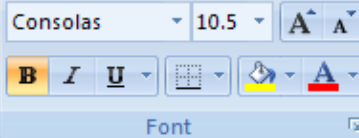
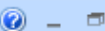
- Technical and compliance assistance – site visits, disinfection methods, sampling, advisories, operational recommendations...
- Sharing info. and status reports “daily” with partner agencies, SECC through state Web EOC, and dept. Intranet for DEQ programs.
- Daily (or as necessary) updates to program staff and NTK programs ...also held two webinars and several conference calls for coordination efforts.



Tracking Sheet – for 65 systems during flooding events



Home Insert Page Layout Formulas Data Review View



A79 fx "Water System Status"

	A	B	C	D	E	F	G	H	I	
1	PWS Flood Incident Tracking Spreadsheet									
2	Date Reported	Water System	PWS ID #	DEQ PWS Region	Population	Classification	County	Town/City	Contact Person & phone #	Issue or Event:
3	5/11/2011	Osen's RV	MT0000040	Billings	100	Transient	Park	Park County	John Lundberg 222-0591	well and wastewater sy
4	5/23/2011	Town of Lodge Grass	MT0000277	Billings	932	Community	Big Horn	Lodge Grass, Town of	Joe Lavato 629-0529	Reported that "No PWS i keep us updated. Land l sporadic
5	5/23/2011	Kipp Campground	MT0002431	Billings	25	Community	Fergus	Fred Robinson Bridge near Hwy 191	Ron Hayes 538-1921	campground closed due outage.
6	5/23/2011	Miles City	MT0000291	Billings	8800	Community	Custer	Miles City	Al Kelm 234-3462	main break do to flooding efforts implemented and installed. 10" water main replaced soon. Extreme posing construction diffi also causing problems fo being closely monitored
7	5/24/2011	Huntley Yellowstone Co. Water/Sewer	MT0000254	Billings	230	Community	Yellowstone	Huntley	Josh Jabalera (operator) 208-0619 cell	Billings Gazette photo sh inundated with flood wa
8	5/25/2011	Boyer Creek	MT0000255	Billings	525	Community	Yellowstone	Huntley	Josh Jabalera (operator) 208-0619 cell	Reported that "No PWS

Sheet1 List

Ready

Count: 8

75%

PWS Tracking Sheet...

Water System Status

- **Ok** – no known problems at this time
- **Shut Down** – Not in operation
- **Boil Order**- Dept. or system has issued a boil order
- **Health Advisory**- Dept. or system has issued a health advisory
- **Partial Outage** – part of the system is unavailable or isolated
- **Threatened** – structurally, operationally, or environmentally there is an known threat to the system
- **Operational Changes**- something about the way the system normally operates has changed



Home Insert Page Layout Formulas Data Review View

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Conditional Formatting Format as Table Cell Styles

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A79 "Water System Status"						
	I	J	K	L	M	
37	Dick Lahr	Wastewater threatened and town flooding. PWS okay at this time	Ok	6/8/2011	Karl Carlson	6/7/2011 Dick called to cancel our inspection trying to protect his lagoon cells-also reported and he did not want to have a week long sanit
38	Dale White, 587.6752 and Vickie Barta, 539.9742	Cabin Creek is near the campground and flooded part of the site. High groundwater likely contributed to contamination.	Health Advisory	6/7/2011	Jim Williamson	Vickie Barta is the concessionaire operating the faucets were bagged. Well was shock chlorinated samples were taken 72 hours after flush with
39	Patrick Henry 439-3813	PWS Well 1 (east well) is flooded	Boil Order	6/8/2011	Schultz	6/8/11 on the way to work, I noticed the east h deep. I verified the west wells were not flooded chlorine residuals. He reported that the well
40	Ed Bean 636-2716 and Julie at the School	Lavina area flooding - PWS okay for now	OK	6/8/2011	Karl Carlson	6/8/2011 called Lavina School and inquired as school said they were good for now no issues v to call me if needed and they could contact lon
41	Howard Newman 728-4524 or 549-2525	PWS Well 1 (WL002 - west well) is TC positive and groundwater is near the surface. Pitless adapter is under 6 feet of water.	Health Advisory	6/7/2011	Greg Wermers	6/8/2011 called Howard Newman and inquired said that it appears that Well 2 (WL003 - east pressure tanks and filled them with water from contamination. He is working with the HOA to will sample in 3-4 homes on 6/10/2011. HA iss casings that are more than 2 feet above the gr Both of these wells are high production wells. Fork River the static water level is near the gro are under water. He suspects that the contain pitless adapter seal.
42	Bill Moritz 434-5564	(via WEB EOC) Flood waters may soon threatened Shelby's wells -waiting for call back	Operational Changes	6/8/2011	Schultz	(via WEB EOC) 15:14:16 on 6/8/2011 - that the Marias River is starting to Shelby in and around Williamson Park the several wells in the park. There next to the river. No declaration pe

SECC – WEB EOC postings

Attached is the June 24, 2011 Public Water Supply status spreadsheet(s) for systems that DEQ PWS and Montana's EPA office (for Indian Nations' Water and Wastewater Systems) have contacted or are providing technical assistance for. Access tabs for each DEQ and EPA sheet are at the bottom of the spreadsheet. Please review the attached sheets for system status including advisories, threatened and operational changes.

Boil Order (BO) due to flooding:

**Lewis & Clark Co. - Valley Vista Mobile Home Park
Valley Co. – Cherry Creek WUA Glasgow
Garfield Co. – Hell Creek State Park**

Health Advisories (HA) due to flooding:

**Jefferson Co. - Hangman's Tree (Gruber Estates)
Missoula Co. - Renea's Court
Musselshell Co.- Roundup
Park Co. - Osen's RV
Lewis & Clark Co. – Kims Marina
Missoula Co. – Sunny Meadows**

“The DEQ is hoping, as a responding agency, you will find this public water supply information helpful in your response efforts but this attached document is not intended for public release.”



Montana's Official State Website






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Montana Department of
Environmental Quality

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- [Request for Applications - Funding to Purchase New Clean Diesel School Buses](#)
- [Volunteer Water Monitoring Grants Available](#)
- [MUST Newsletter, Spring 2011](#)
- [Petro Board Seeks Applications in Environment, Banking](#)
- [Draft Environmental Impact Statement \(DEIS\) for the Troy Mine Revised Reclamation Plan](#)
- [Montana Vapor Intrusion Guidance Document](#)
- [Bitterroot TMDLs & Water Quality Improvement Plan](#)
- [MATL Amendment Environmental Assessment](#)



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- [Emergency Preparedness, Security & Safety](#)
- Public Drinking Water**
 - [Activities and Requirements](#)
 - [Consumer Confidence Report](#)
 - [Fluoride Information](#)
 - [GIS Health Advisory Network](#)
 - [PWS Checklists & Forms](#)
 - [PWS Online Query Reports](#)
 - [Waiver Information](#)

- Wastewater Systems**
 - [Activities and Requirements](#)
 - [Drought Monitoring](#)
 - [EPA Envirofacts](#)
 - [Flood Cleanup Health Tips](#)
 - [Publications & Reports](#)
 - [Sewer Main Certified Checklist](#)

- Other Water Quality Links**
 - [Water Conservation Links](#)
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Flood Information

Floods are one of the most common hazards in the United States affecting specific localities or entire river basins and multiple states.

Select a topic link for more information:

- [Wells](#) | [Septic Systems](#) | [Flood Cleanup](#) | [Health](#) | [Public Water/Wastewater](#) | [Underground Storage Tanks](#) | [Current Conditions](#) | [Other](#)



What to do after the Flood

CAUTION: Because of the extensive damage and soil saturation caused by floods, private or public drinking water wells may not be safe to consume and may be

SecureWater.mt.gov

- [Emergency Phone #'s](#)
- [Program Contacts](#)
- [Emergency/Incident Update](#)
- [Emergency Preparedness](#)
- [Flood Information](#)
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- [Safety](#)
- [MT Water & Wastewater Critical Infrastructure Committee](#)
- [Agendas & Minutes](#)
- [Training/Conferences](#)

http://deq.mt.gov/wqinfo/pws/security/floods.mcpx

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Emergency Disinfection of Drinking Water

After a flood in your area, use only water that has been deemed safe to consume or has been properly disinfected for consumption such as drinking, cooking, making prepared drinks and foods, and for brushing teeth. See emergency disinfection methods in the link below.

Visit these sites for more information

Wells

- [What to do After the Flood - Well Inspection & Treatment](#)
- [EPA Emergency Disinfection of Drinking Water](#)

Septic Systems

- [Manage Your Septic During and Following a Flood](#)

Flood Cleanup

- [Flood Cleanup Health Tips](#)
- [Mold Cleanup After Floods](#)
- [EPA Mold & Moisture Guide](#)
- [Mold Information from the Centers for Disease Control and Prevention](#)
- [Mold and Mildew Cleanup Tips](#)
- [Mold Cleanup Guidelines - Tips and Techniques](#)

Health

- [Flood Information and Guidance from DPHHS](#)
- [Vaccination Recommendations When Working Around or Cleaning Up Flood Waters in Montana](#)

Public Water/Wastewater

- [Boil Order Fact Sheet](#)

http://deq.mt.gov/wqinfo/pws/security/floods.mcpx

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Public Water/Wastewater

- [Boil Order Fact Sheet](#)
- [MT WARN - Montana Utilities Helping Utilities](#)
- [Surface Water Treatment Plants - Flood and/or High Erosion Events](#)
- [Wastewater Treatment Facilities - In Case of Flooding](#)

Underground Storage Tanks

- [Underground Storage Tank Flood Guide](#)

Current Conditions

- [Inciweb - National Incident Information System](#)
- [Montana Disaster & Emergency Services \(DES\)](#)
- [Real Time USGS Flow Data for Selected Montana Streams](#)
- [Lewis & Clark County Flood Information](#)

Other

- [Federal Emergency Management Agency \(FEMA\) FloodSmart.gov](#)
- [National Oceanic & Atmospheric Administration \(NOAA\) Spring Outlook](#)
- [West MT NOAA 2011 Spring Flood Potential](#)
- [Ready America Flood Safety](#)



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[+] [MT WARN Brochure 2010](#)

[+] [May 24, 2010 DRAFT
Mee...](#)

[+] [Nashville Flooding - T...](#)



Wildfires can require water
from surrounding communities

What is MT WARN?

Montana Water /Wastewater Agency Response Network - "utilities helping utilities" through mutual aid to respond to and recover from emergencies.

Why do we need MT WARN?

The **MT WARN** network provides a method whereby water/wastewater utilities that have sustained damages from natural or man-made events could obtain emergency

Impacts to Water and Wastewater Systems

Wastewater Impacts

- Lift stations shutting down
- Broken collection lines
- Excess influent flows resulting in the need to divert to holding areas
- Unable to provide any treatment due to high flows.
- Diverting wastewater around treatment to prevent washing sludge to river/creek,
- By-passing primary treatment,
- Erosion of dike walls
- Flooded manholes and lift stations...

Permitted Wastewater Systems

- Water Protection Bureau (WPB) worked with 91 systems that were affected in some manner.
- No violation letters issued to facilities for exceeding permit parameters that were directed related to the flooding events. However, violation letters were issued to facilities that failed to report information or failed to provide an explanation related to a reporting problems.
- WPB -completed both a review of all effluent monitoring exceedances and permit conditions (SSOs, pipe breaks, manhole overflows, dike erosions, etc). The cities and towns were responsive and provided information that clarified their unique situations during the flooding. WPB compliance considered the flooding issues completed for 2011 in October of that year.

WPB – via Kari Smith

- Appreciates PWS asking about wastewater upon contacting systems
- Not just discharge should be considered as a problem but also the man holes that are over flowing – the systems need to make sure their county sanitarians are aware of sewer issues.
- Permitted systems should continue to monitor the best they can and submit reports – if they cannot then they should be reporting why.
- Notifying WPB gives the system somewhat of a “get out of Jail card” in their compliance concerns.
- If it is not working the way it is suppose to then it is non compliant.
- Permitted or not, WPB will help and pass to right person.
- WPB is also dealing with feed lots, construction sites, and treatment backwash pools.

Drinking Water Impacts

- Threatened treatment plants
- Wells were flooded
- Rise in Ground Water caused increased total coliform issues and violations
- Distribution and main line breaks
- Infiltrations galleries were inundated with flood water
- Operations were adjusted to mitigate compromised facilities

Musselshell River Basin

Statement in the request of Federal Assistance-

“The flooding caused substantial damage to the municipal water system in Roundup and required the state to assist with deploying potable water trucks as well as bottled water to take care of essential needs of the residents. In addition, portable shower units and hand wash stations have been deployed to assist with their immediate needs while local officials attempt to repair the water system and allow it to resume to safe capacities.”

Roundup Timeline

- 5/26-Initial call ...Town Flooding
- 5/27-Water system compromised
- 5/28-Operating on restrictions-pumping out plant
- 5/30-Low pressure, low tank... need to pump water
- 5/30-Pumping on self-issued boil order
- 5/31 -Emergency boil order issued by Department
- 6/8-Site visit conducted
- 6/8-Town flooding again, dikes around plant held 15 days and conditions were not better





2011/05/26



2011/05/26





Roundup. Photo shows the high water mark from flood waters of the Musselshell River on the lift station. Notice the control panel just inside the lift station. Controls were damaged below the high water mark, but were replaced quickly once water receded.





Campground

Campground



Campground – June 2011



Yellowstone River Basin

Home

News

Organization

Search for:

NWS All NOAA

Go

ALERT!! A Flood Warning and Flood Watch are in effect for portions of the area. [View all valid statements/warnings](#) or choose a specific point or river to get the details for that location.

Weather Forecast Office Billings, MT

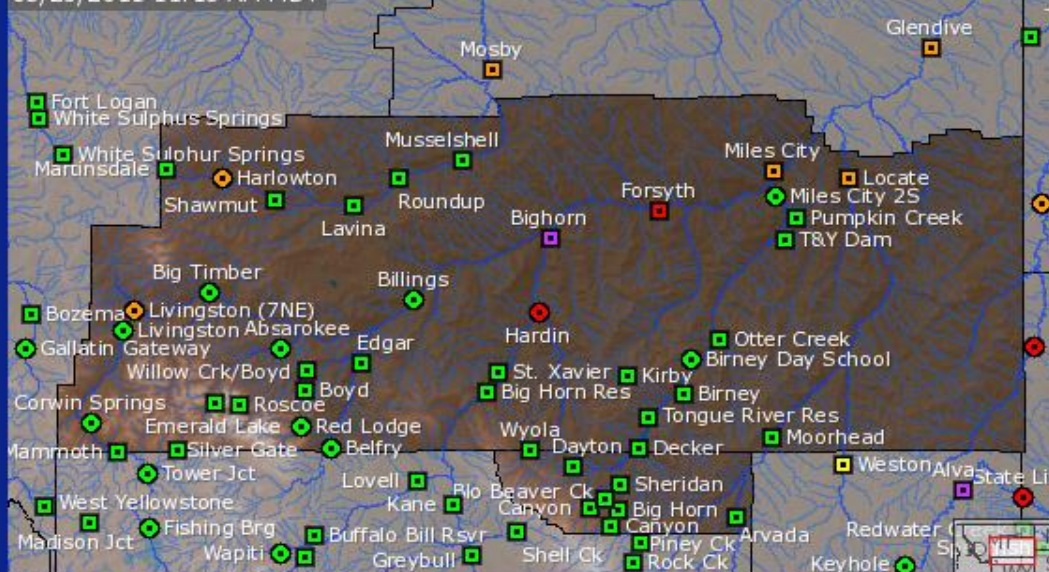
River Observations

River Forecasts Within 48 Hours

Precipitation

Download

05/23/2011 11:15 AM MDT



☒ Topo ☒ Gauges ☐ Counties ☒ States ☒ Major Rivers ☒ Other Rivers ☐ Highways ☐ Cities
☒ HSA ☒ Names ☐ Names ☐ Names

75 Total Gauges 13 Locations in flood

RSS

Print / Save Map

Map Legend

☐ Hydrograph Available

☐ Probability and Hydrograph Available

Major Flooding

Moderate Flooding

Minor Flooding

Near Flood Stage

No Flooding

Observation More Than 24 Hours Old

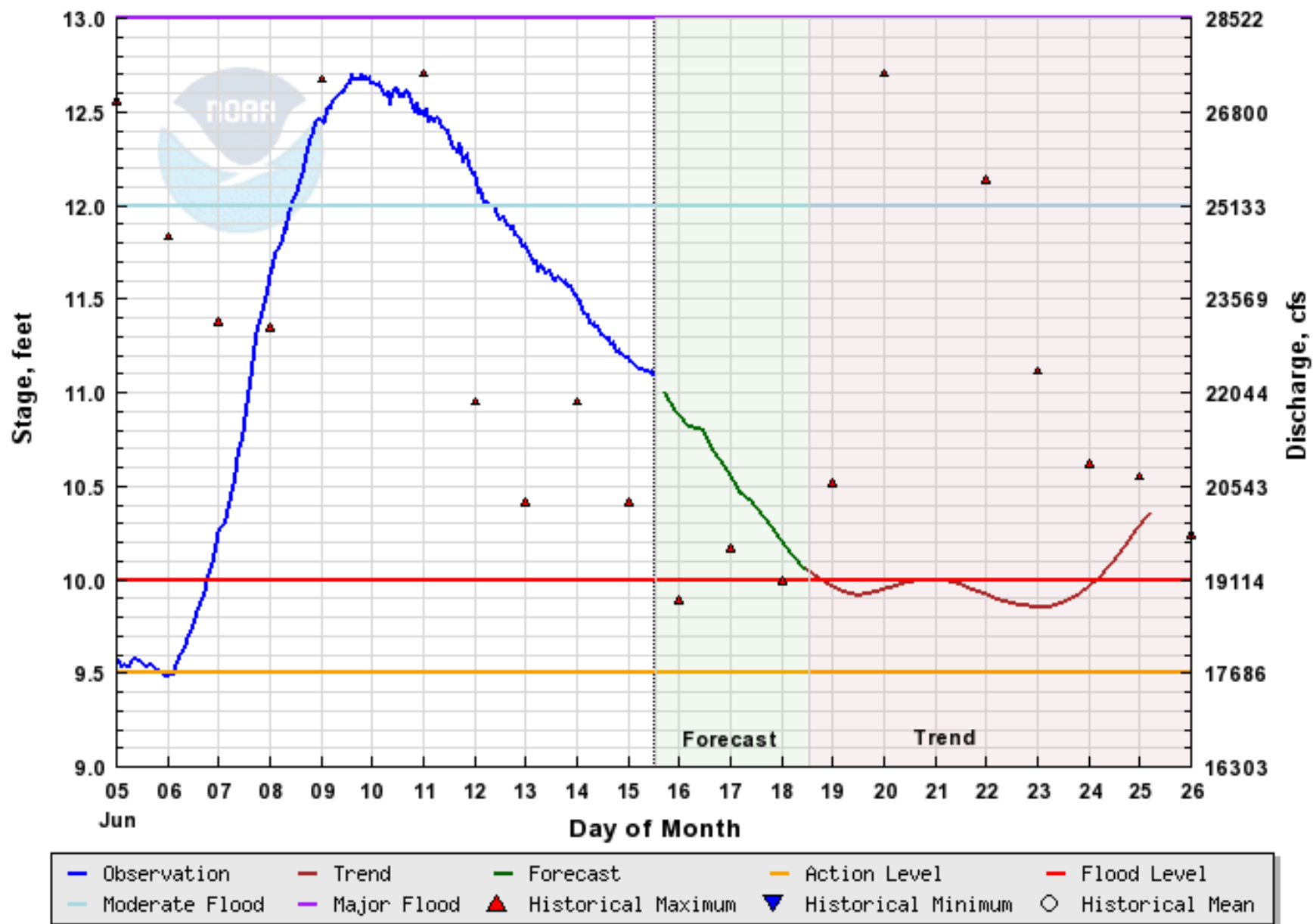
Out of Service

Yellowstone River

- Mile City – one of two transmission mains, under the river, broke. Water conservation efforts used.
- Laurel – refinery assisted in sand bagging around the treatment plant and also gave money to system for mitigation expenses.
- ...

Clarkfork River Basin

CLARK FORK - ABOVE MISSOULA (ABOM8)



Forecast Created: 06/15/2011 09:05 PDT

Plot Created: 06/15/2011 01:12 PDT

Observations Provide by USGS





Miscellaneous ... areas



Denton, Widespread flooding - June 2011



Belt Broken force main in Belt Creek. Flooding scoured about 5-feet of creek bottom to expose pipe. Wastewater flows will be rerouted to another lift station in order to eliminate this crossing.



Denton lagoons. Rising groundwater from flooding caused air bubbles to form in liner beneath lagoon cell. Bubbles receded when groundwater levels dropped after flood ceased.

Subdivision near Helena



06/07/2011

Prickly Pear Creek

Wells

06/07/2011





East Helena



Well 2 along Wylie Drive

06/07/2011



South infiltration gallery

McClellan Creek

View under normal conditions

06/30/2010



**North Infiltration well access
under this new building!**

06/30/2010



McClellan Creek

06/30/2010



06/08/2011



06/08/2011



06/08/2011

Infiltration wells

South

North

06/08/2011



MT Law Enforcement Academy

System view from shop area (photos 2006)



Discharge
piping

Pump house

Prickly Pear Creek

Storage tank





Mobile Home Park near Helena



06/09/2011

06/09/2011



Shelby

Overview of Well Field



An aerial photograph showing a flooded landscape. In the foreground, a building with a green roof sits on a patch of dry grass. To its right, a small blue structure is partially submerged in floodwater. The surrounding area is densely populated with green trees, many of which are surrounded by or partially submerged in the murky floodwater. A white text box with the label 'Well 1' is positioned in the upper right quadrant of the image.

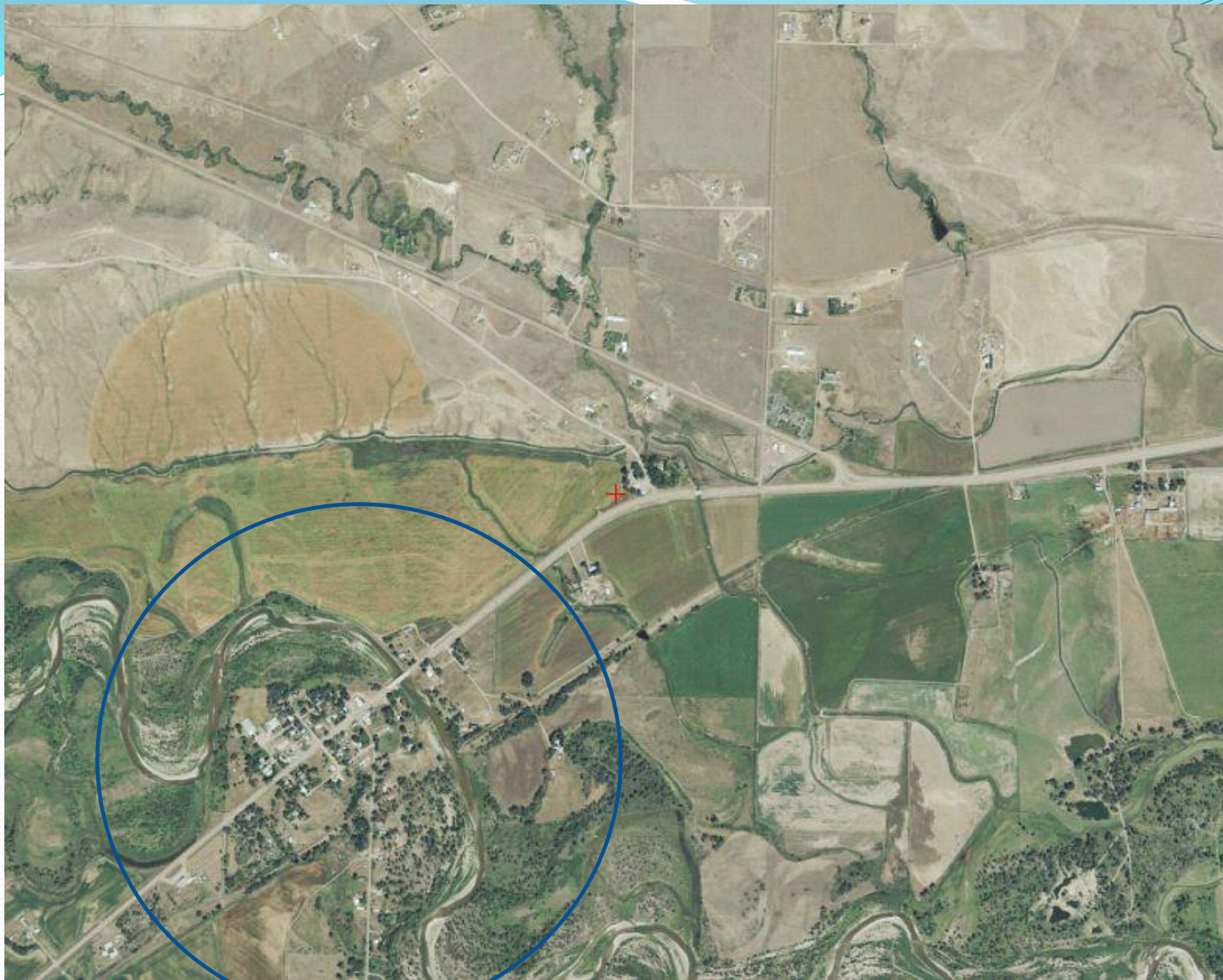
Well 1



Well 1

The background is a solid blue gradient with a wavy, undulating pattern at the top, resembling a stylized horizon or water surface. The waves are in shades of light blue and white, creating a sense of movement and depth.

Sun River



Private Well Calls

- Directed them to their County Health Departments for additional assistance
- Made them aware of the flood page on Secure Water site which has well and septic information that SWP provided.
- Assisted in locating additional bacteriological sample bottles and assisted county sanitarians.

Recovery and Mitigation Efforts

FEMA

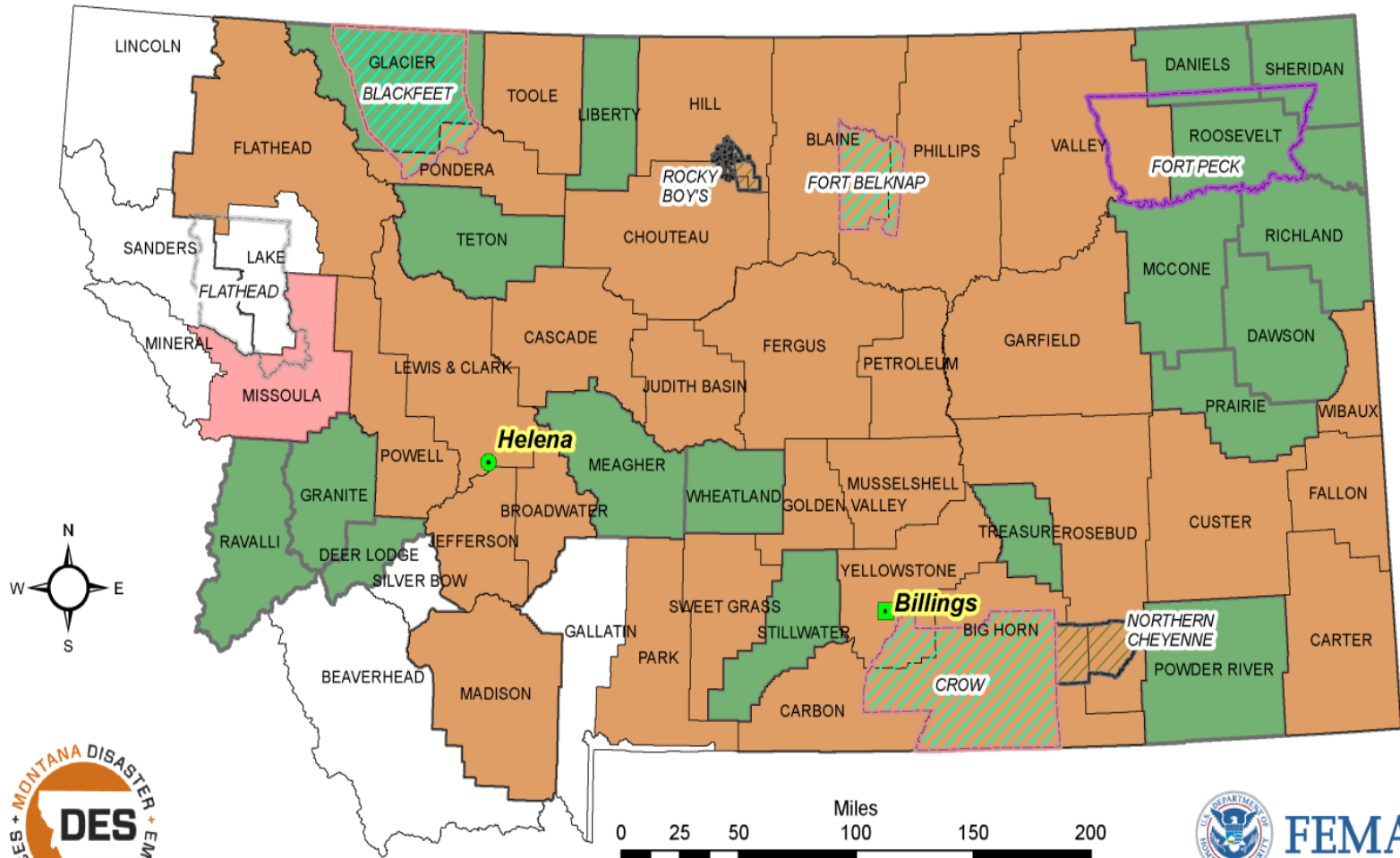
- Individual Assistance was approved and FEMA set up offices throughout the state to assist individuals in getting assistance.
- The Public Assistance for publicly owned facilities had a damage cost estimate of over \$44,000,000
- Some projects and recoveries are still occurring – boxes and boxes of documentation at DES office.

FEMA-1996-DR-MT

PA and IA Declared Counties/Reservations

Declared date: June 17, 2011

Amendment No. 4: August 24, 2011



Legend

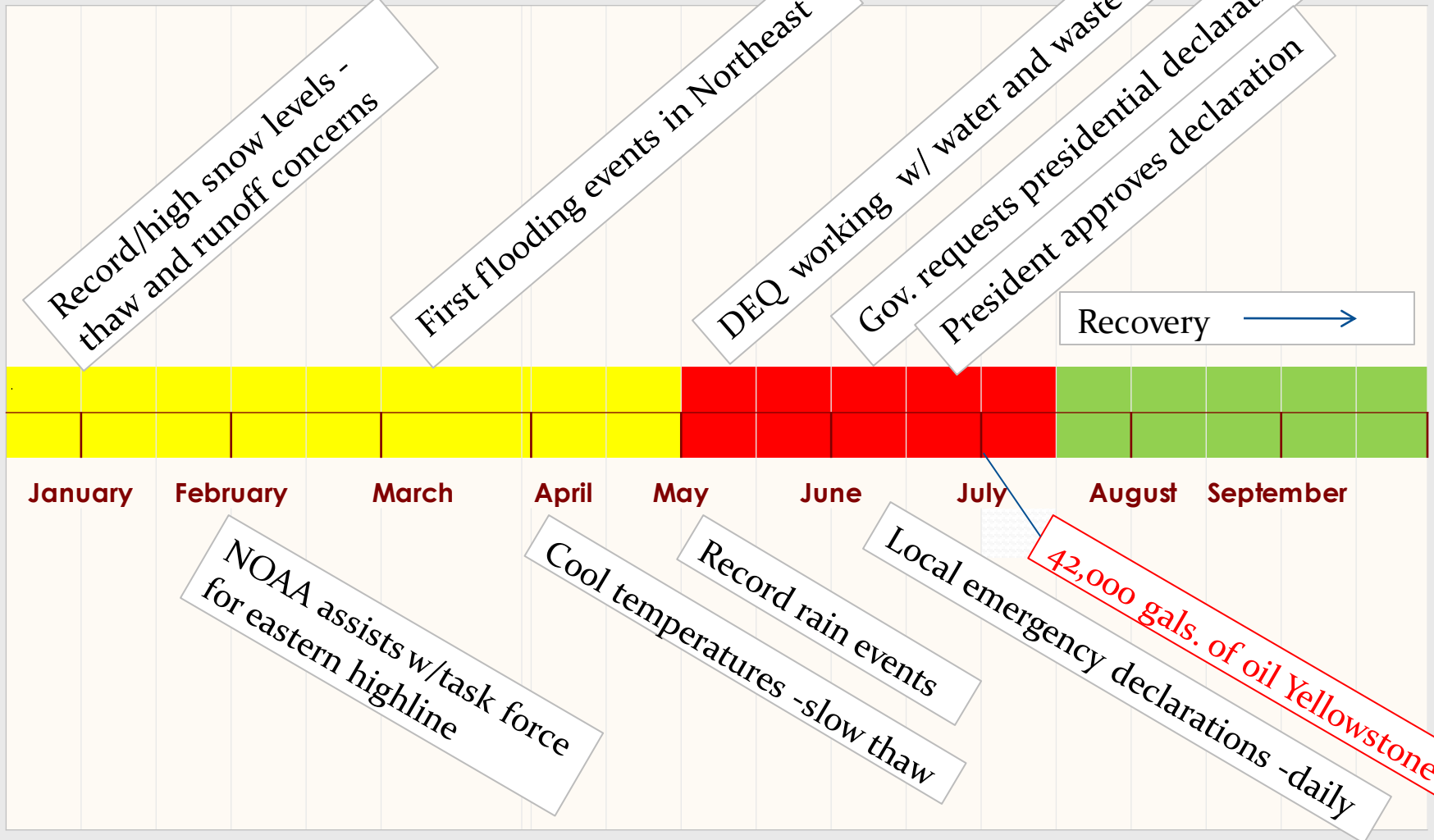
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|------------------------|-----------------|--------------------|--------|
| Reservations | PA Reservations | PA AND IA Counties | County |
| IA Reservation | JFO | IA County | |
| PA and IA Reservations | FFO | PA Counties | |



FEMA

Second Disaster Strikes – July 1

2011 Flooding Events

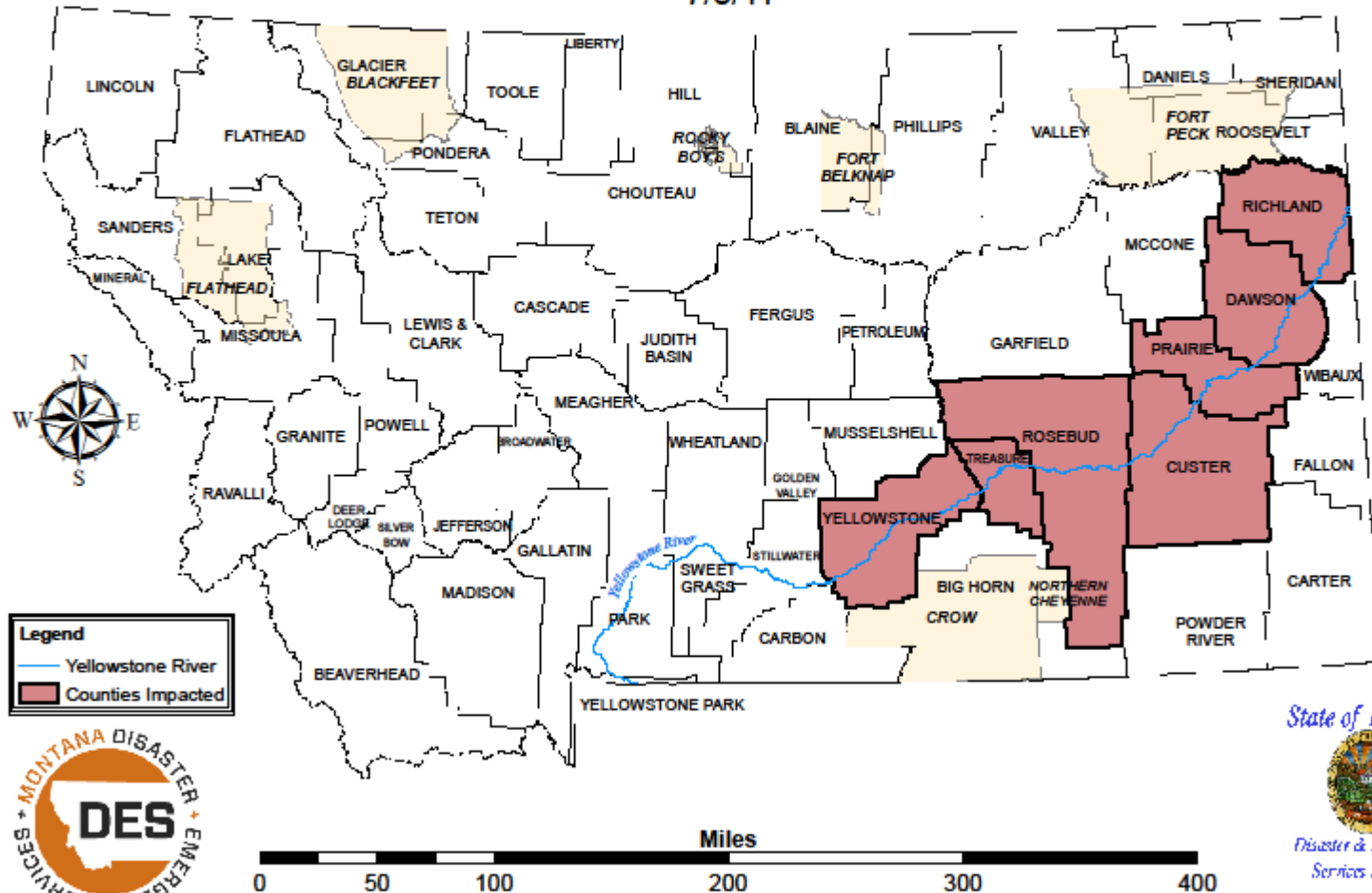


EXXON Oil Spill

- July 1, 2011: 42,000 gallons of oil was spilled from a broken pipe that was buried under the Yellowstone River.
- The old pipe (6' below the river bed which became exposed) is still in place but a new pipe which is in service was drilled and placed ~40-70' below the river bed.

Executive Order NO. 09-2011

**EXECUTIVE ORDER PROCLAIMING AN EMERGENCY
TO EXIST IN THE COUNTIES OF YELLOWSTONE, TREASURE, ROSEBUD, CUSTER, PRAIRIE,
DAWSON AND RICHLAND ALONG THE YELLOWSTONE RIVER DUE TO OIL SPILL
7/8/11**



State of Montana



Disaster & Emergency
Services Division

Oil plume PWS awareness

- Systems appreciated our outreach and notification
- Several systems had already talked to each other
- Some intakes are shut down at night anyway
- A few systems keep intakes closed until plume passed
- Inquired about the depth of intakes
- Encouraged them to take advantage of additional sampling



DEPARTMENT OF ENVIRONMENTAL QUALITY

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Silvertip Oil Spill

- 2 [Approved Treatment Methods for the Silvertip Oil Spill Clean Up](#)
- 2 [Silvertip Oil Spill Water and Soil Sample Results](#)
[Data available as of August 4, 2011](#)
- 2 [ExxonMobil Silvertip Pipeline Release Soil Sample Results](#)
 - [DEQ and Property-Owner SOIL Collected Results as of August 3, 2011](#)
 - [DEQ and Property-Owner WATER Collected Results as of August 3, 2011](#)

Crews continue to clean up, and further assess and track where oil landed following this summer's Yellowstone River oil spill. On Friday night, July 1, 2011, an estimated 1,200 barrels, or about 50,000 gallons of crude spilled into the fast-moving, flood-stage river when ExxonMobil's Silvertip Pipeline broke near the company's Laurel refinery. The 12-inch pipeline was buried about four feet under the river bed. What caused it to sever is still under investigation.

At the time, the high water was

Contacts:

[Mary Ann Dunwell](#)
Information Specialist
Remediation Division
(406) 841-5016

[Lisa Peterson](#)
Public Affairs Coordinator
Director's Office
(406) 444-2929



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Multi-tasking to a new level!



Went to Great Lengths to Assist!

QUESTIONS & COMMENTS

